FOOD SCIENCE AND DIETETICS 2
(FOOD SCIENCE TECHNOLOGY AND NUTRITION 2)

Course Code: 5757

Food Science and Dietetics 2 is designed to provide students with more technical knowledge regarding food preparation, processing, preservation, and packaging.
Students will have an opportunity to produce an original product, technique, or process to be used in the food industry. Throughout the course of this class, students will demonstrate management principles and practices that are necessary to be successful in the workplace. Integration of the Family and Consumer Sciences student organization, Family, Careers, and Community Leaders o America (FCCLA) greatly enhances this curriculum.

Objectives:

Students will:

1. develop an original product, technique or process.
2. establish habits of good nutrition.
3. evaluate a variety of chemical and physical changes that affect food product quality.
4. analyze methods used and factors involved in the scientific processing of food.
5. apply scientific process skills to analyze the structure and composition of food.
6. research food science, dietetics, and nutrition careers.

Credit: 1-3

National Certification: ServSafe
http://www.schospitality.org

Recommended Grades: 11-12

Class Size: 20

Prerequisites: Food Science and Dietetics 1

Textbook Information: **http://www.mysctextbooks.com/**

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High School Education:	product packager, product grader, produce worker
Postsecondary Education:	food inspector assistant, packaging manager, sales and service manager
Postgraduate Education:	food inspector, quality control technician, food scientist, product developer

Standards Revision Committee:

Yvonne Britt
Hanahan High School

Virginia Bruce
Batesburg-Leesville High School

Donna Bundrick
South Carolina Department of Agriculture

Charles Cherry
Department of Health and Environmental Control

Nikki Drye
Pontiac Foods

Bonita Manson
South Carolina State University

Janice Oates
South Carolina Department of Education
Office of Food Services

April Sanders
Olympia Learning Center

Billie Southard
Keenan High School

Anna Turner
Bob Jones University

Patricia Wolman
Winthrop University

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A. Safety And Sanitation

1. Incorporate safe use of lab equipment.
2. Integrate safe lab techniques and procedures.
3. Implement sanitation practices in the workplace.
4. Evaluate safety and sanitation procedures when receiving, preparing, serving, and storing food.

B. Scientific Evaluations

1. Explain why scientific equipment was required for scientific investigations.
2. Analyze methods used and factors involved in the scientific processing of foods.
3. Investigate the relationship between matter and foods.
4. Implement the scientific method.
5. Evaluate foods using the sensory process.
6. Verify that basic scientific principles were used in experiments.

C. Metabolism

1. Analyze the metabolic impact of nutrients on the body.
2. Create daily meal plan for various caloric intakes.

D. Food Chemistry

1. Analyze the properties and uses of water.
2. Analyze enzyme reactions in foods.
3. Analyze the function of acids and bases in foods using the pH scale.
4. Differentiate the functions of the nutrients.

E. Food Microbiology

1. Investigate the process of fermentation.
2. Specify the process for making cultured foods (i.e. dairy foods).

F. Food Processing And Preservation

1. Compare food-processing methods.
2. Determine the appropriate processing methods for popular food items.
3. Evaluate various methods of preservation: dehydration, freezing, canning, fermenting, and irradiation.

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G. Food Safety

1. Identify the epidemiological studies associated with life experiences.
2. Relate the risks and/or threats to the world's food supply.
3. Determine the economic and ethical advantages and disadvantages of using biotechnology to produce, process, and preserve food products.

H. Development

1. Produce an original product, technique, or process that might be used in the food industry.

I. Careers In Food Science

1. Research career paths within food science, dietetics, and nutrition.
2. Integrate knowledge, skills, and practices required for careers in food sciences.